

WE CLAIM:

1. A method for production of a connection between a mobile station and a communication network, in which a connection is made between the mobile station and the network after the selection of the connection parameters via an access point, wherein usable connection options to different networks using different standards and frequency bands are identified automatically in that, after selection of a first standard, a check is carried out of the connection options within this standard, in that a second standard is then selected by likewise checking the connection options, and storage of parameters which identify that standard with which the connection option was found, **characterized** in that a connection is set up by the mobile station to an access point which is being communicated to via a standard and for which a connection option has been found on the basis of selection criteria under program control or by manual selection.

2. The method as claimed in claim 1, **characterized** in that the connection is set up using the connection option which achieves the maximum data throughput.

3. The method as claimed in claim 1, **characterized** in that the identification and the data storage are carried out before logging on with an access point.

4. The method as claimed in claim 1, **characterized** in that the identification and the data storage are carried out while a connection exists to an access point.

5. The method as claimed in claim 4, **characterized** in that, before the identification process is carried out, the current access point is signaled that the mobile station cannot receive data for an agreed time, and arriving data is buffered in the access point.

6. The method as claimed in claim 4, **characterized** in that the mobile station logs off the current access point, which is carrying out the identification process, before the identification process is carried out, and in that the mobile station logs on with the same access point or with another access point after the completion of the identification process.

7. The method as claimed in claim 1, **characterized** in that the identification and the data storage or updating, for which parameters which identify the standard of a connection option are stored from a second identification process, which follows the first identification process, are carried out within a time period in which no data is transmitted, and the mobile station is not busy carrying out other processes, which it may not be possible to interrupt.

8. The method as claimed in claim 1, **characterized** in that the identification and the data storage or updating, for which parameters which identify the standard for a connection option are stored from a second identification process which follows the first identification process, are carried out periodically.

9. The method as claimed in claim 1, **characterized** in that the identification of usable connection options is carried out by transmission of a signal to possible access points and by evaluation of the received signal, or just by evaluation of the received signal.

10. The method as claimed in claim 1, **characterized** in that the identification process is carried out in a data transmission pause during an active connection to the access point.

11. The method as claimed in claim 1, **characterized** in that, in the event of a deterioration in the transmission quality or a connection failure to the current access point, a

change is made to an access point which ensures a better transmission quality, after accessing the stored data or another identification process.

12. The method as claimed in claim 1, **characterized** in that the switching to different standards and frequency bands is carried out under program control or by rebooting a processor.

13. The method as claimed in claim 1, **characterized** in that a periodic comparison is carried out between the connection parameters to the current access point and other connection options, and in that a change is made to another connection option automatically or manually.